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Research Paper

Open And Distance Education in India Through using Technology

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ABSTRACT
When the whole world is obsessed with artificial intelligence, why would not technology impact education and that too in open and distance education? The digital India campaign is transforming the entire country into a digitally empowered and knowledge-centric society. Similarly, various aspects of education such as open education, distance education should also be developed and all forms of technology should be used. NEP 2020 calls for the formation of "The National Education Technology Forum" (NEFT) composed of autonomous bodies to Use of technology to communicate various activities.
At present there are many cases of un-fulfillment of certain number of seats in various subjects in various colleges and universities. This lack of students shows that we need to give importance to distance education as well as formal education. Today's infectious diseases and epidemics teach us that formal education is not always possible. In this situation, provision of quality education should be made with the help of technology in the field of open and distance education. Distance education can also be done online and students have to ensure its quality.
KEYWORDS: *open and distance education, technology, online, NEP 2020.*

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I. INTRODUCTION

The use of technology in open and distance education is essential. Technology is a key tool for overcoming the drawbacks of distance learning, such as the large number of students' remote locations and the need for the institution to provide a variety of facilities for students at various stages of their educational lives with a limited number of human resources.

The growth of open and distance education in India is a testament to how innovation and technology can democratize education. Open and Distance education has enabled many people to achieve their educational goals, from traditional, correspondence courses to interactive online programs and MOOCs. Moving forward, the development of online education promises to open-up access to excellence education for all, regardless of barriers. Technology allows the transition from static learning element to more progressive interactive media content. Students learn faster and are more involved when they not only read a textbook and passively listen to a teacher but also take part in engaging academic activities.

This paper discusses how technology impacts the development and implementation of Open and Distance Education in India. It also says that specific technologies and their applications in Open and Distance Education to help educational institutions understand how they can develop open and distance education in India.

COMPARISON BETWEEN OPEN EDUCATION AND DISTANCE EDUCATION

Open education means specific type of educational institution, usually a public university that enrolls students in a variety of courses and programs without traditional admission. Open education (school or university) uses all kinds of techniques and technologies possible to teach its students. They broadcast radio and television and have the entire infrastructure to produce their own radio and TV programs. They use all the techniques of distance learning, such as curriculum, group tutorials, video instruction etc. Open education is the most flexible. Open University gets the opportunity to participate directly in National Radio and TV broadcasting with its own programs.Some institutions of Open Education are- Indira Gandhi National Open University, Netaji Subhas Open University.

On the other hand, in Distance education, educational content and instruction are delivered through digital medium. Open University may be considered distance education, but all distance education is not Open University. Learning resources for distance education are prepared by teachers and used by distance learners from home. In this way there is more interaction than correspondence education. Here the teacher uses all kinds of techniques, such as- personalized learning, watching learning, also mass media, such as- radio, newspapers, television etc. Distance education is a collection of different types of lessons, there is no question of immediate or continuous association with the teacher. Various universities include distance education. Universities are West Bengal which offer distance education is: Vidyasagar University, Rabindrabharati University, Kalyani University.

OPEN AND DISTANCE EDUCATION: THE INDIAN SCENE

According to Commission on Non-formal Education, open and distance education is an education system where students are more important than institutions and are more concerned with student benefits than institutional benefits. In addition, this education system provides versatile facilities to students in all fields irrespective of place, time, program, curriculum, age and situation. The Education Commission (1964-66) recommends that the education system in the letter age should be expanded rapidly in detail and this should be done in the field of science and technology.

The world's first Open University was established in the United Kingdom. Following this path, the first G Parthasarathi Committee in India recommended the establishment of Open Universities in 1971. But it was not until 1985 that this proposal was given any concrete form. However, in 1982, the Andhra Pradesh Open University Act was enacted under the leadership of Professor G Ramreddy. As a result of this, the Indira Gandhi National Open University was established on 20th September 1985 by Parliament at the central level.

PURPOSE OF THE STUDY

Research studies try to understand the use of technology from the student's aspects to deliver quality education across distances. The study's goal is to ascertain whether technology has advanced to a point where it can help teachers or students deliver high-quality instruction despite time and space restrictions. Furthermore, this study will try to find out which technological variations provide a satisfactory interactivity to students and instructors, which is essential of traditional education.

LINK OF TECHNOLOGY WITH DISTANCE EDUCATION

This section discusses how technology has affected distance education. Gates (1995) says people may fear that technology will dehumanize education. He continued by saying that people would reconsider whether technology will truly humanize education if they could view pupils who live abroad and exchange knowledge across national boundaries. Gates continued with the statement, "*The same technological forces that will make learning so necessary will also make it practical and enjoyable. Corporations are reinventing themselves around the flexible opportunities afforded by information technology; classrooms will have to change as well."*

BENEFITES OF TECHNOLOGY IN DISTANCE EDUCATION

Technological developments are offers the following benefits:

- Accessibility- Removing geographic restrictions can make learning accessible from any location for students who are physically unable to attend the classroom, because distance learning is accessible to students from almost anywhere.
- Increased collaboration- Distance education with the help of technology creates a better collaborative spirit among students as students can stay in touch with students from any part of the world.
- Flexibility- Many highly motivated and self-disciplined students prefer distance learning programs. They maintain their performance in well-organized and virtual settings. It gives you the flexibility to learn from anywhere anytime.
- Personalization learning- Here the student can learn according to his own desire and freedom.
- Comfortable learning- Since students do not need to go to institution traditionally, students can study comfortably at home.
- Skill development-Through the Internet and World Wide Web, new and increased sources of information and knowledge provide opportunities for teachers and students to self-development as well as facilitate inclusion in the classroom environments.
- Time management- Students can study at their own time and space. Especially those who are employed can continue their studies after their work. Email and other Internet based feedback mechanisms offer great opportunities for distance learning to reduce isolation and time.
- Save time and money-Another feature of distance education is the low cost of education. Those who could not get admission in traditional educational institutions for any reason will get an opportunity to

study. Through community access schemes, distance learning facilities are more likely to eventually be made available to low income people and rural communities.

- Online networking-Through reductions in telecommunications bandwidth costs and the emergence of advanced cable, transceiver and satellite system, greater opportunities for live interaction are central to basic access, online interactive learning, video conferencing, and distance education programs.
- Educational technology- Through the extraordinary speed of software development, teaching and learning are enriched advanced graphics, animation, interaction and visualization.
- Better engagement- Open education is a platform to utilize leisure time effectively. Everyone can get admission without discrimination of upper age limit, reading rate.

II. METHODOLOGY

This study was purely theoretical and the data were collected from various sources like books, magazines, web forums, journals and another web sources including the NEP 2020 document.

III. DISCUSSION

1) Technology initiatives in NEP 2020 for education sector

NEP-2020 discusses how education plays a transformative role in transforming India into a knowledge-based economy and digitally driven society. While education is at the core of this transfiguration, technology will progress the learning process and its outcome. Hence, the use of technology and its integration in education has become imperative. The teaching-learning process both within and outside of the classroom is greatly expanded and influenced by emerging technologies including artificial intelligence, automation and robotics, machine learning, the internet of things, block chain, cloud computing, smart board, handheld devices, and e-proctored examinations. This requires in-depth research on both areas.

The National Education Technology Forum (NETF) should be established, according to NEP-2020, to help central and state government agencies make decisions on the introduction and use of friendly technology in educational institutions by offering evidence-based guidance. The activity of NETF is (a) providing independent and evidence-based dictate to Central and State Government agencies on technology-based interventions. (b) Building intellectual and institutional capacity in educational technology. (c) In all these special cases strategic policy planning is highly effective. (d) Documenting new trends in innovation and research. The main objective of the technology intervention is to increase the availability of teachers, facilitate proper planning, management and administrative processes, which will include processes related to admission, attendance and assessment. Various software will be available in different Indian languages and efforts will be made to reach out to students with disabilities and students living in marginal and rural areas. At the all level Multilingual educational software will be tested, custom designed and made accessible to students and teachers. Active learning platforms like DIKSHA, SWAYAM will be integrated in education system.NEP 2020 was developed at a time when technologies such as artificial intelligence, 3D/7D virtual reality etc. The function of NETF is to categorize essential technologies and prepare these analyzes to the MHRD. Institutions of higher education should not only play an active role in research on transformative technologies, but also in developing innovative instructional materials and curricula, as well as assessing its impact in specialized areas such as professional education. Technology will make certain types of jobs redundant, so there is need to create new avenues of income and employment and the emphasize up-skilling and de-skilling to sustain them. With platforms like SWAYAM, universities will offer PHD and post-graduate programs in multidisciplinary fields like machine learning, artificial intelligence and various professional fields like healthcare, agriculture and law. Higher education institutions (HEIs) will prepare basic courses in advanced domains to skill the students towards job readiness. Ethical issues and legal issues related to artificial intelligence based technologies and data handling, data protection etc. need to be emphasized. Other technologies that affect our lives are renewable energy, sustainable agriculture, water conservation, environmental representation, soil protection and green initiatives.

2) Online and digital education, initiatives in NEP-2020 for Open and Distance Education: Ensuring Equitable Use of Technology

NEP-2020 recommends the following key initiatives for integration of ODL mode of education with regular or conventional education:

1. **Pilot studies for online education**- National organizations for performance evaluation and ongoing development include NETF, CIET, NIOS, IGNOU, IITs, NITs, etc.

2. **Digital infrastructure-** which is open, interoperable, evolvable for use of multiple platforms and point solution.
3. **Online teaching platform and tools**- SWAYAM, DIKSHA can be extended for two-way audio-video online classes.
4. **Content creation, digital repository, and dissemination**- A digital repository of coursework content, simulations and games, augmented and virtual reality will be developed for dissemination and use. Fun based learning tools like apps, gamification, multiple languages, will be created.
5. **Addressing the digital divide**- mass media such as radio, community-radio,Television will be worked for telecast and broadcasts which will be available 24/7 in different languages.
6. **Virtual labs**- DIKSHA, SWAWAM, and SWAYAMPRABHA will be utilized to create virtual laboratories where students have equitable access to high-quality practical and hands-on experience.
7. **Training and incentives for teachers**-teachers will be adequately trained in student centred teaching and it will also teach how to deliver high quality online learning using online learning platforms and tools.
8. **Online assessment and examinations**-Appropriate agencies i.e. proposed National Assessment Centre, PARAKH, NTA, School Boards and other identified agencies will define and implement the assessment framework. Assessment methods will be studied using technology in education with a focus on 21st century skills.
9. **Blended models of learning**- The importance of traditional face-to-face learning alongside the advancement of digital teaching and learning are being fully recognised.
10. **Laying down standards**-As research in the field of online/digital learning continues to evolve; NETF and other appropriate organizations will set specific criteria for content, pedagogy, and technology for online/digital learning.

IV. CONCLUSION

In conclusion, integrating technology into the classroom may be a powerful strategy for raising student participation and fostering a more engaging and dynamic learning environment. Distance learning has added a great technology evaluation and a new level of higher education to our generation. All over the world we have resorted to learning online with the help of technology during the pandemic situation. Keeping in view the new situation and reality, it can be said that in any situation and in any place traditional and personal and special type of education is not possible. In those places alternative system of quality education should be created. In this regard, the National Education Policy 2020 acknowledges the potential risks and pitfalls of technology, but also recognizes the benefits it brings. It needs to be ascertained how we can benefit from this approach while minimizing the harmful effects of online learning. To sum up, integrating technology into the classroom may be an effective way to increase student participation and create a more dynamic and engaging learning environment. Our generation has benefited much from distance learning, which has raised the standard for higher education.

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